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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,888	10/29/2003	Walter Henry Berryman	0641-0255P	4113

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EXAMINER
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TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/694,888	BERRYMAN, WALTER HENRY	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian K. Talbot	1762	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/3/06 has been entered.
2. Claims 13-24 have been canceled. Claims 1-12 remain in the application.
3. In light of the amendment filed 12/1/05, the 35 USC 112 rejection has been withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the phrase “one or more elements” is vague and indefinite as it is unclear what the term “elements” includes. Hence, the term “elements” in the claim thereby renders the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). The Examiner suggests deleting the phrase to obviate the rejection.

With respect to claims 5,9 and 10, the claims are vague and indefinite. The claims do not recite what process is performed to select/choose the processing parameters as well as the fact that the phrase “control bending” would include the range from no bending to a great deal of bending as the claims only require “control” and not prevention of the bending.

With respect to claim 8, the claim is not further limiting. The claim recites “leaving in place the dielectric layer on the reverse side” which is performed in the dependent claim 6 that does not recite any “removal” of the dielectric layer. Hence the dielectric layer “remains” on the reverse side. The Examiner suggests deleting the claim to obviate the rejection.

With respect to claim 9, the term “various layers” lacks antecedent basis as the independent claim recites “dielectric layer”.

With respect to claim 10, the term “arranging dielectric layers” lacks antecedent basis as the independent claim recites “dielectric layer”.

With respect to claim 11, the claim utilizes improper Markush terminology. Applicant is reminded when reciting a group of terms the phrase “selected from the group consisting of” should introduce the grouping and the last term should be preceded by an “and” not an “or”.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,4, and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DE 383598 A1.

DE 383598 A1 teaches a method for producing electronic circuits for thick-films in sensors in conjunction with a strain-gauge built onto the substrate. At least one glass-ceramic insulation layer is applied onto a metallic substrate, dried and heated in a neutral atmosphere that includes CO<sub>2</sub>. A second layer of glass-ceramic insulating layer is applied and fired in an oxidizing atmosphere, i.e. air, and fitted with conducting tracks and or electronic components including strain-gauges. The substrate is a titanium-alloy or respectively titanium (pg. 2, machine translation filed 12/1/05)

***Claim Rejections - 35 USC § 103***

7. Claims 5,9,10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 383598 A1.

Features described above concerning DE 383598 A1 are incorporated here.

DE 383598 A1 fails to recite “controlling bending” by controlling processing parameters of heating, thickness, coefficient of expansion, etc.

While the Examiner acknowledges the fact that the DE 383598 A1 fails to specifically recite controlling these parameters, DE 383598 A1 does chose the processing parameters to achieve the desired result which is all that is necessary to meet the claimed limitations are recited. DE 383598 A1 depicts in the drawings a final product that does not suffer from distortion/bending or warping. Furthermore, the specification does not recite or even hint at this phenomenon even occurring.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 383598 A1 in combination with Sreeram et al. (6,551,720).

Features described above concerning DE 383598 A1 are incorporated here.

DE 383598 A1 fails to recite the glass-ceramic composition to include lead.

Sreeram et al. (6,551,720) teaches a titanium substrate being coated with a lead-based glaze and then a glassy-dielectric layer which can include lead prior to applying conductive ink thereto. The lead glaze reduces oxidation of the titanium and allows good mechanical locking of the titanium to the glass ceramic composition in the firing process (col. 11, lines 20-35).

With respect to the lead diffusing into the titanium surface, it is the Examiner’s position that this would inherently take place as the instant invention and the combination of prior art utilize the same or similar materials. If Applicant disagrees, Applicant is invited supply a showing of how the instant invention achieves this feature while the prior art would not even

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thought the materials are the same. Upon such a showing the Examiner will reconsider his position.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 383598 A1 in combination with Lindson (2,959,503).

Features described above concerning DE 383598 A1 are incorporated here.

DE 383598 A1 fails to recite protecting the reverse side of the titanium substrate with a glass-ceramic composition to prevent oxidation of the titanium.

Lindson (2,959,503) teaches coating a titanium or titanium alloy substrate with a glass frit to protect it from oxidation during subsequent processing including heat treatments (col. 2, lines 10-30).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified DE 383598 A1 process by incorporating a protective glass coating on the reverse side of the titanium substrate as evidenced Lindson (2,959,503) because of the advantages associated therewith, i.e. preventing oxidation of the underside of the titanium substrate.

### ***Response to Amendment***


8. Applicant's arguments filed 12/1/05 have been fully considered but they are not persuasive.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 3/8/06  
Brian K Talbot  
Primary Examiner  
Art Unit 1762

BKT